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DEPARTMENT OF TRANSPORTATION

Standard Detail Drawing 8d5 (sheet a)

June 24, 2016

Curb Ramps Types 1 and 1-A

References:

FDM 11-25-30 FDM 11-20-1

Bid items associated with this drawing:

ITEM NUMBER	<u>DESCRIPTION</u>	<u>UNIT</u>
601.0600	Concrete Curb Pedestrian	LF
602.0505	Curb Ramp Detectable Warning Field Yellow	SF
602.0510	Curb Ramp Detectable Warning Field White	SF
602.0515	Curb Ramp Detectable Warning Field Natural Patina	SF
602.0405	Concrete Sidewalk 4"	
602.0410	Concrete Sidewalk 5"	SF
602.0415	Concrete Sidewalk 6"	SF
602.0420	Concrete Sidewalk 7"	SF
646.0113 - 0119	Pavement Marking (material) 6-Inch	LF
647.0763 - 0769	Pavement Marking Crosswalk (material) 6-Inch	LF
647.0773 - 0779	Pavement Marking Crosswalk (material) 12-Inch	
647.0783 - 0789	Pavement Marking Crosswalk (material) 18-Inch	LF
647.0793 - 0799	Pavement Marking Crosswalk (material) 24-Inch	

Standardized Special Provisions associated with this drawing:

NONE

Other SDDs associated with this drawing:

SDD 8D5 Curb Ramps sheet "b", "c", "d" and "e" and

SDD 15C33 Stop Line and Crosswalk Pavement Marking is required when this drawing is called for in the

plans.

Design Notes:

The Type 3 should be used only when there may be utilities or other fixed objects in the way of the curb ramp installation and cannot be relocated.

These SDDs may not satisfy all field conditions. It may be necessary to develop special details showing elevations or other layout considerations.

The Product Acceptable List (PAL) has only cast iron products for the Detectable Warning Field (DWF). The typical size of DWF panel in cast iron is 2 ft x 2 ft. Other cast iron panel sizes available include 2 ft x 1 ft, 2 ft x 1.5 ft, 2 ft x 2.5 ft, and 2 ft x 3 ft. The site-specific application will always be wider than 2 feet, thus multiple DWF panels are required for each installation. Maintain a maximum 5-foot distance between back of curb ramp and near edge of DWF panel(s). If this distance exceeds 5 feet, stagger an additional warning field panel to reduce this distance. Provide adequate row overlap to avoid sidestep of dome detection. Align domes in direction of pedestrian travel.

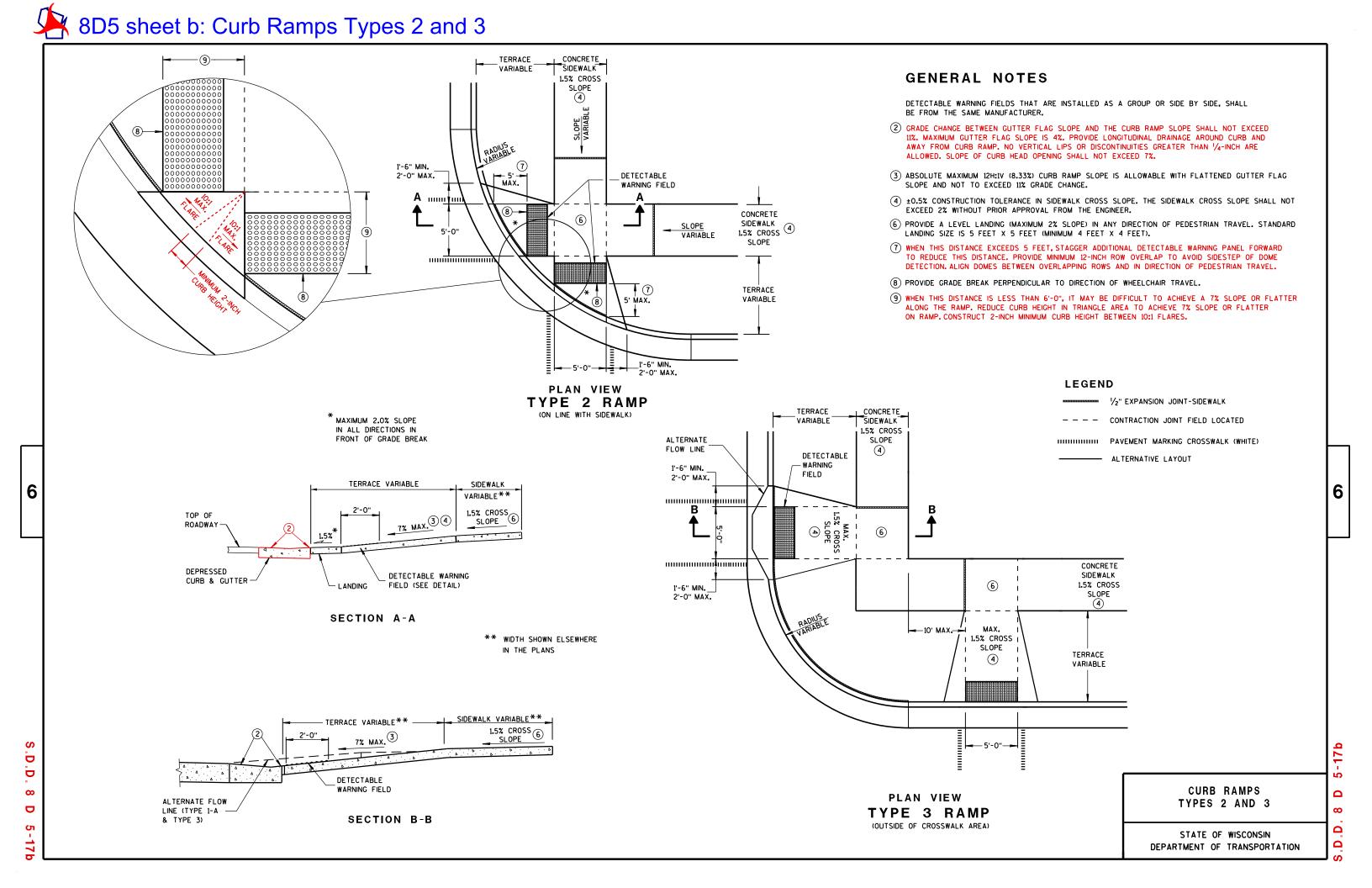
The Detectable Warning Field shall be installed in plastic concrete. The area under the Detectable Warning Field is paid as concrete sidewalk. Do not install the Detectable Warning Field in or on asphaltic pavement.

Do not install drainage grates in the path of curb ramp or sidewalk users. Slope the gutter pan so the curb ramp area will drain away from the pedestrian crossing.

Shared use paths are typically 10 ft wide, with some 8ft and some 12 ft. The Detectable Warning Field shall be placed at the edge of the paved portion of the path width. Do not provide space between multiple panels. Using the typical panel sizes mentioned above, for example, a 10-ft wide path would need five - 2' x 2' panels to cover the full width. Refer to FDM 11-46-10.2 for Detectable Warning Field application at wide directional curb ramps with a larger intersection radius and/or narrow terrace.

The yellow border pavement marking is not required with the use of the Detectable Warning Field. See SDD 8D5-b for Curb Ramp pay items used for restriping of curb ramp markings.

Contact Person:



Standard Detail Drawing 8d5 (sheet b)

June 24, 2016

Curb Ramps Types 2 and 3

References:

FDM 11-25-30 FDM 11-20-1

Bid items associated with this drawing:

 ITEM NUMBER
 DESCRIPTION
 UNIT

 601.0600
 Concrete Curb Pedestrian
 LF

See Sheet "a".

Standardized Special Provisions associated with this drawing:

See Sheet "a".

Other SDDs associated with this drawing:

SDD 8D5 Curb Ramps sheet "a", "c", "d", and "e" are required.

SDD 15C33 Stop Line and Crosswalk Pavement Marking is required.

Design Notes:

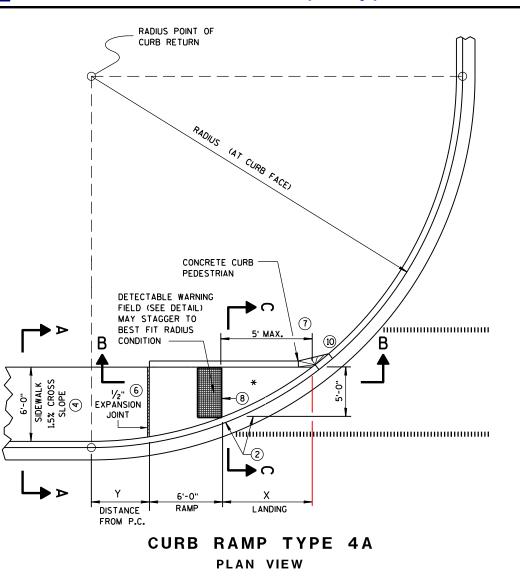
See Sheet "a".

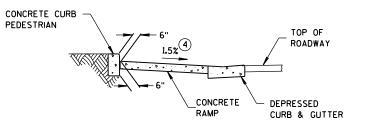
Curb Ramp pay items used for restriping of curb ramp markings are as follows (do not use these pavement markings when using Curb Ramp Detectable Warning Fields):

647.0503 Pavement Marking Curb Ramp Paint
 647.0506 Pavement Marking Curb Ramp Epoxy

3. 647.0509 Pavement Marking Curb Ramp Preformed Plastic

Contact Person:





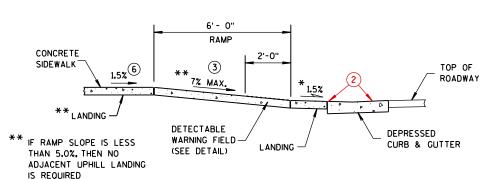
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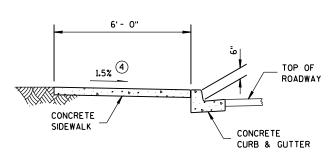
SECTION C-C FOR TYPE 4A



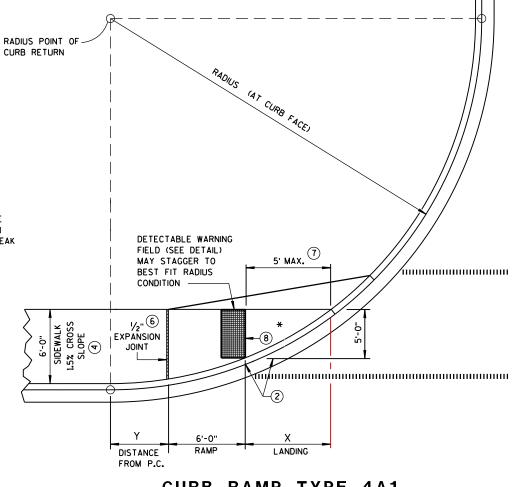
SECTION B-B FOR TYPE 4A

RADIUS AT CURB FACE 20 FEET 7'-11" 0'-2" 30 FEET 10'-23/4" 1'-71/2" 40 FEET 12'-11/4" 2'-10" 50 FEET 13'-83/4" 3'-103/4" 60 FEET 15'-2" 4'-10'/4"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A



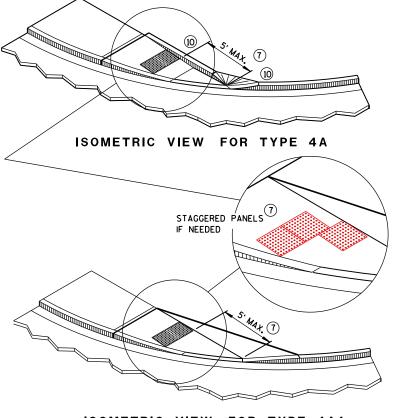
PLAN VIEW

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

- (2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.
- (3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- (4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- (6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).
- (7) WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE, PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.
- (8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- (10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

1/2" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

HIHIHIHI PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPES 4A AND 4A1

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STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

CURB RAMP TYPE 4A1

Standard Detail Drawing 8d5 (sheet c)

June 24, 2016

Curb Ramps Type 4A

References:

FDM 11-25-30 FDM 11-20-1

Bid items associated with this drawing:

 ITEM NUMBER
 DESCRIPTION
 UNIT

 601.0600
 Concrete Curb Pedestrian.....LF

See Sheet "a".

Standardized Special Provisions associated with this drawing:

See Sheet 'a'.

Other SDDs associated with this drawing:

SDD 8D5 Curb Ramps sheet "a" "b" "d" "e" are required.

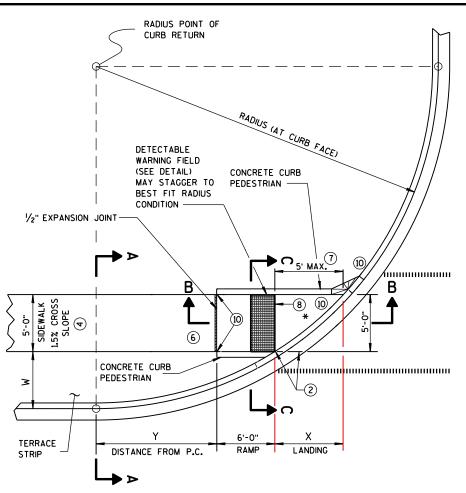
SDD 11B2 Concrete Median Nose is required

SDD 15C33 Stop Line and Crosswalk Pavement Marking is required.

Design Notes:

See Sheet 'a'.

Contact Person:



LEGEND

¹/₂" EXPANSION JOINT-SIDEWALK CONTRACTION JOINT FIELD LOCATED

HIHHHH HI PAVEMENT MARKING CROSSWALK (WHITE)

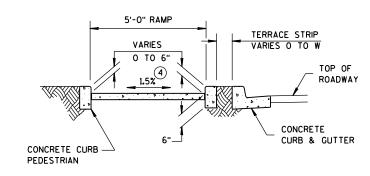
RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - Ø"		W = 5' - 0"		W = 6' - Ø"		W = 7' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y
20 FEET	5'-9¾"	3'-61/2"	4'-11'/2"	5'-1¾"	4'-3'/4"	6'-51/2"	3'-8¾"	7'-6¾"	3'-3"	8'-6'/4"
30 FEET	7'-91/4"	5'-101/2"	6'-91/2"	7'-11'/4"	6'-0'/4"	9'-8"	5'-5"	11'-1¾''	4'-10¾"	12'-5¾"
40 FEET	9'-4"	7'-10"	8'-2¾"	10'-3"	7'-4¾"	12'-3¾"	6'-81/2"	14'-1'/4"	6'-1¾"	15'-81/2"
50 FEET	10'-8"	9'-61/2"	9'-51/2"	12'-3'/4"	8'-61/2"	14'-71/2"	7'-9¾"	16'-8'/4"	7'-21/2"	18'-6'/4"
60 FEET	11'-10'/4"	11'-0¾"	10'-61/2"	14'-1 /4"	9'-61/2"	16'-8'/2"	8'-91/4"	18'-11¾"	8'-11/2"	21'-0 ¹ / ₂ "

GENERAL NOTES

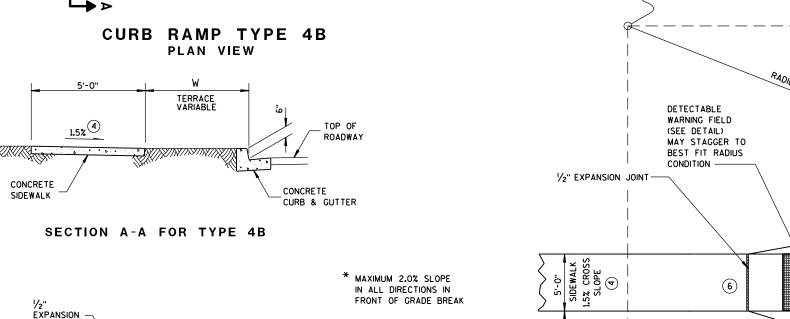
INTERMEDIATE RADII CAN BE INTERPOLATED

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS. DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

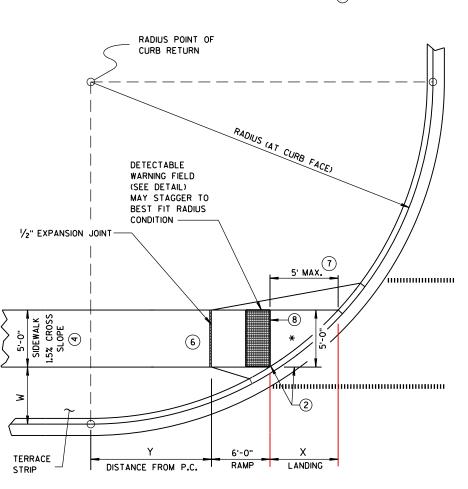
- (2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.
- 3 ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- (4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- (6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).
- (7) WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE, PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.
- (8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- (IO) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



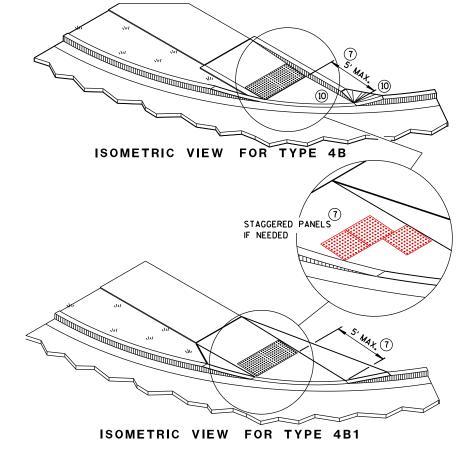
SECTION C-C FOR TYPE 4B



1/2" EXPANSION 6'-0" JOINT RAMP CONCRETE VARIES SIDEWALK TOP OF 7% MAX.3 ROADWAY ** LANDING -DETECTABLE DEPRESSED WARNING F IF RAMP SLOPE IS LESS CURB & THAN 5.0%, THEN NO LANDING GUTTER (SEE DETAIL) ADJACENT UPHILL LANDING IS REQUIRED SECTION B-B FOR TYPE 4B



CURB RAMP TYPE 4B1 **PLAN VIEW**



CURB RAMPS TYPE 4B AND 4B1

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

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Standard Detail Drawing 8d5 (sheet d)

June 24, 2016

Curb Ramps Type 4B

References:

FDM 11-25-30 FDM 11-20-1

Bid items associated with this drawing:

ITEM NUMBERDESCRIPTIONUNIT601.0600Concrete Curb PedestrianLF

See Sheet "a".

Standardized Special Provisions associated with this drawing:

See Sheet a.

Other SDDs associated with this drawing:

SDD 8D5 Curb Ramps sheet "a", "b", "c" and "e" are required.

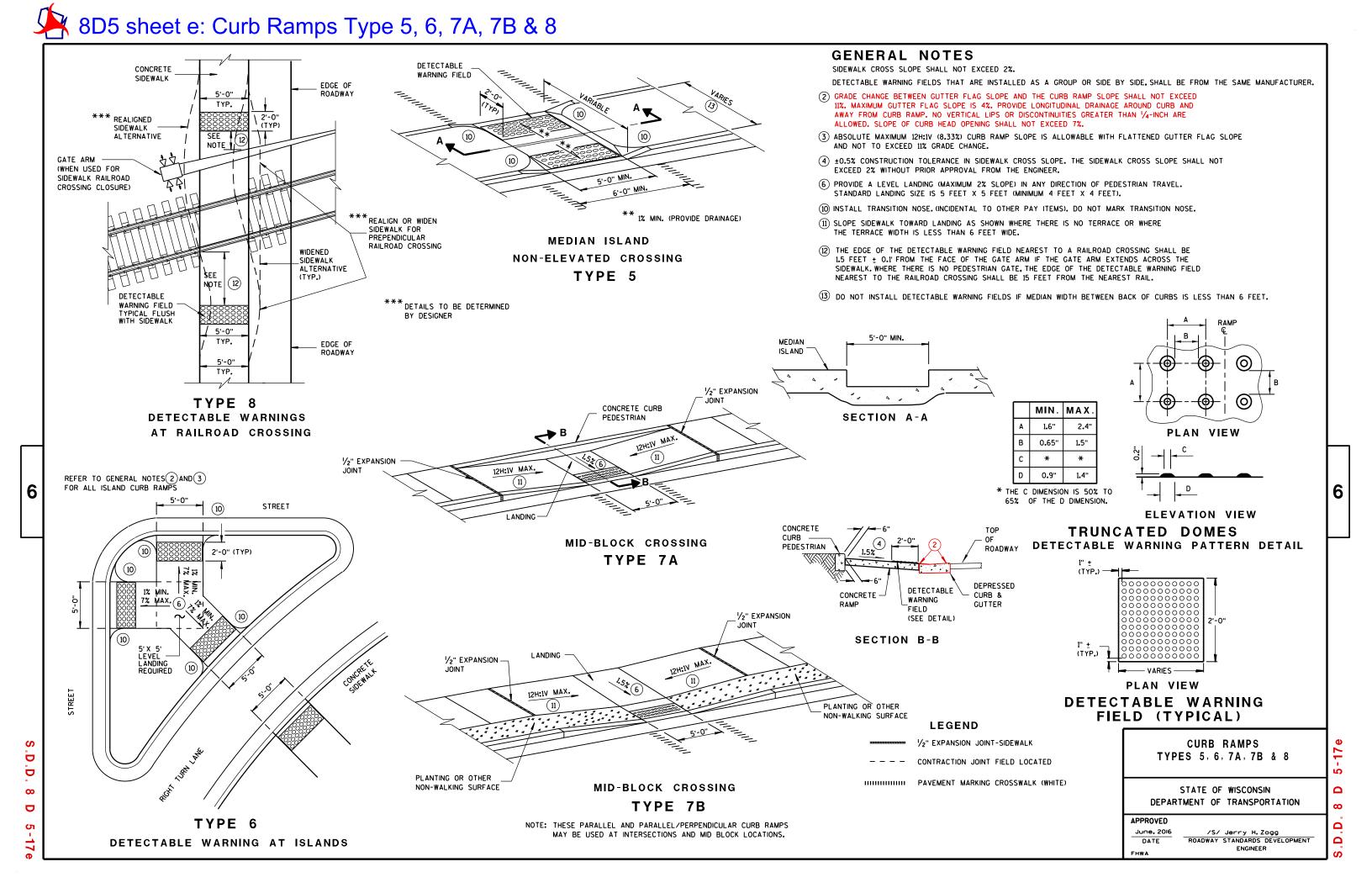
SDD 11B2 Concrete Median Nose is required.

SDD 15C33 Stop Line and Crosswalk Pavement Marking is required.

Design Notes:

See Sheet "a".

Contact Person:



Standard Detail Drawing 8d5 (sheet e)

June 24, 2016

Curb Ramps Type 5, 6, 7A, 7B & 8

References:

FDM 11-25-30 FDM 11-20-1

Bid items associated with this drawing:

ITEM NUMBERDESCRIPTIONUNIT601.0600Concrete Curb PedestrianLF

See Sheet 'a'.

620.0300 Concrete Median Sloped Nose.....LF

Standardized Special Provisions associated with this drawing:

See Sheet 'a'.

Other SDDs associated with this drawing:

SDD 8D5 Curb Ramps sheet "a", "b", "c" and "d" are required.

SDD 11B2 Concrete Median Nose is required.

SDD 15C33 Stop Line and Crosswalk Pavement Marking is required.

Design Notes:

See Sheet "a".

Contact Person: